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LEUCOCYTHÆMIA.

[Read before the Boston Society for Medical Improvement, November, 1858, and communicated for the Boston Medical and Surgical Journal.]

CASE II.—BY CALVIN ELLIS, M.D.

Disease of some of the Lymphatic Glands; Enlargement of the Heart, Liver and Spleen; Cavity filled with a bloody Fluid in the left side of the Chest; Peculiar Crystals in the Blood.

IN November, 1858, an Irishman, a cigar-maker, 38 years of age, entered the wards of Dr. Bowditch, at the Massachusetts General Hospital. When 12 years of age, he had an attack of fever and ague, from which he entirely recovered, and continued well until ten weeks before he entered the Hospital, when he noticed that his abdomen was swollen. Nausea and vomiting soon became quite troublesome after taking food, but ceased in a few weeks. Appetite moderate. Bowels regular. Occasionally had night sweats, but no fever. No pain anywhere. Had lost some strength, but, as he thought, no flesh. Pulse 90. Tongue natural.

On examination of the abdomen, it was found, generally, fuller than usual, and occupied by a solid tumor, which extended from a point below the umbilicus, upwards, along the median line, and under the left ribs, where it was lost. In this region, there was dulness on percussion. No suffering was caused by pressure. Percussion over the liver, normal. The normal impulse of the heart was felt between the fourth and fifth ribs.

At the inner edge of the left scapula, was a rounded prominence, and dulness was detected over a space two inches or more in diameter. The respiration in this back was somewhat deficient, especially in the dull portion, and, in front, was less than usual, being scarcely heard below the third rib.

The urine was examined by Dr. BACON, Nov. 12th, and found to be acid. Density 1.020. It contained, also, a small deposit of the casts of the tubuli and granular matter.

Nov. 21st.—A sulcus was noticed in the tumor, extending from the ribs downwards.

25th.—Some pain during the night in the region of the tumor. The abdomen measures 33¼ inches.

28th.—At first, was able to be up most of the time, but now, only half an hour at once. Is unable to bear as much food, owing to a sense of fulness and pressure in the abdomen.

Dec. 2d.—For the last two or three days, some giddiness, and almost total deafness on the left side. No pain in the ear.

5th.—Rather more deaf. The cough which commenced yesterday is, to-day, almost constant. Expectoration consists of muco-purulent, greenish, or bloody matter. Nothing abnormal noticed on auscultation or percussion, as low as the third rib on the left side, and the fourth on the right. Below these points, there was dulness, and in the lowest part of the right side a muco-crepitant râle. No increased resonance of voice.

8th.—Much cough and more bloody sputa. Perhaps a little less resonance on percussion in the lower part of the right back, but respiration is less in the upper half of the left, though not particularly morbid. Strong expiration in the upper third of the right back. In front, on the right side, the respiration is loud; on the left side much less, with an occasional doubtful râle.

9th.—On the 7th, pain was complained of in the right shoulder and arm, but this disappeared in three days. To-day, there is pain in the left arm.

10th.—Since last night, pain in the left side of the chest, right hip, and both feet. The latter are now œdematous. Upon the left side are two prominences, as broad as the side itself, one extending from the axilla to a point situated a short distance below the line of the nipple; the other from that to the ilium. Both are elastic and tender, but not red.

Respiration obscure in the lower half of the left back, where a coarse râle is occasionally heard. Dulness over left breast, as high as the clavicle. Respiration very indistinct over the swelling in the left side. Rudely puerile in the right breast. Several bloody sputa.

11th.—About an ounce of purulent sputa streaked with blood. Some redness in the swelling.

12th.—The upper portion of the swelling is larger and redder, while the lower has rather subsided. The first, when the patient rises in bed, is four or five inches in diameter, and projects two inches from the surface of the ribs.

14th.—Sweating freely. Pulse weak. Considerable cough. Expectorates, in twelve hours, about half an ounce of mucus, chiefly opaque and purulent. Upper portion of the external tumor larger and more prominent. The lower portion has wholly subsided. Tongue pale and clean. Is very thirsty.

15th.—Has sweat copiously. But little pain in the external tumor.

16th.—Fell, on attempting to walk last evening, and injured the right brow, which still bleeds a little. Was delirious in the night. Respiration easy. Countenance sunken. On the 17th, he died.

Sectio Cadaveris, by Dr. ELLIS.

Some blood extravasated beneath the dura mater. The surface of the convolutions had a somewhat opaque, reddish look. The latter was strongly marked in the pia mater of the anterior part of the longitudinal fissure. A number of small ecchymoses in the left optic thalamus. Choroid plexuses rather lighter colored than usual.

The posterior half of the lower lobe of the right lung, and a much smaller portion of the corresponding part of the left, were more solid and friable than usual, and presented somewhat the appearance of pneumonia. On examining the lungs on the following day, it was quite difficult to detect or limit the changes above described. Considerable œdema of the remaining portions, which, in other respects, were healthy.

Half an ounce of serum in the pericardium. In the right side of the heart were upwards of four ounces of dark-red, loosely coagulated blood, resembling the pulp of a softened spleen. The same extended into the vessels in every direction, as far as they were examined. About one ounce, of the same character, in the left side. Heart generally hypertrophied. Weight, fourteen ounces. In other respects not remarkable. In the jugular vein, or vena innominata, were dark-red coagula, upon the surface of which were green, purulent-looking collections.

Left edge of the omentum adherent to the spleen and parietes.

The liver and spleen had forced up the diaphragm as high as the fourth rib, at its point of junction with the cartilage. Liver much enlarged. Weight, six pounds, four ounces. Length, eleven and a half inches. Breadth, eight and a half inches. It was of a brownish-red color, and somewhat flaccid. No congestion of either system of vessels. On microscopic examination, much free fat was seen, in the form of minute globules, and the cells were deformed, broken and filled with granular matter. The blood of the vena portæ was liquid, though somewhat thicker than usual, and decidedly morbid in appearance, resembling red paint.

Spleen much enlarged, and adherent to the diaphragm. Weight, four pounds, fourteen ounces. Length, ten inches. Breadth, six and a half inches. Thickness, three and a half inches. A large portion of the capsule of the convex surface had the firm, whitish, cartilaginous appearance so often seen. Substance quite firm, of a dark-red color, and variegated by small, white points.

On microscopic examination, the peculiar corpuscles belonging to the organ were seen, but nothing which could be considered decidedly morbid.

The blood of the splenic vein resembled very closely that of the portal vein above described.

Kidneys paler than usual. Weight of each, seven and a half ounces.

Mucous membrane of the stomach of a light slate color.

Contents of the small intestine of an olive-green color, and of the usual consistence. Mucous membrane darker than usual, like that of the stomach. In other respects normal. Considerable fæcal matter in the large intestine.

The lymphatic glands along the trachea were considerably enlarged, softened, and of a dirty-brown color. Perhaps some enlargement of those in the abdomen, but the change was not very decided here. Other organs normal.

In the left axilla, was a large cavity, containing, by estimate, upwards of a pint of thick, dark-red fluid, very much like the blood within the body. The walls, examined by the failing light, appeared to be formed by the muscles, with which the fluid had lain in immediate contact. The axillary vessels showed no traces of a rupture, as far as examined.

A microscopic examination of the blood from the heart, the splenic vein and the vena portæ, showed the same change in all, viz.: a *great preponderance of the white corpuscles.* Some of these contained nuclei, and the latter became apparent in all, after the addition of acetic acid. They were either single, granular, and about 0.005 mm in diameter, or composed of two or three smaller globules, the latter being in a number of instances so grouped as to form a kind of semi-circle.

Two or three days after the examination, crystals were noticed in the blood. These were analyzed by Dr. J. C. WHITE, whose report will be found below.

The fluid from the axilla contained both white corpuscles and red coloring matter, with a few red discs, but all were indistinct and broken.

The lymphatic glands contained a large number of corpuscles, like the white corpuscles of the blood, although some were perhaps a little larger, and many contained distinct single nuclei like those of the blood. Many free nuclei were also seen, resembling, like those within the cells, the "globulins" described by Robin in the *Memoirs of the Society of Biology of Paris.* After the addition of acetic acid, the resemblance between the cells from the lymphatic glands and the white corpuscles of the blood became still more striking.

Analysis of the Blood, by Dr. WHITE.—The chemical analysis of the blood is, under the most favorable and normal conditions, a difficult and unsatisfactory matter; for authorities still differ as to what is serum and what plasma, and different chemists give us quite different results. It is with much circumspection, then, that we should receive the quantitative analysis quoted by Bennett in

his monograph on this disease; for very little blood could be drawn from the patients while living, and after death the relative proportions of the fluid and solid properties change rapidly. Moreover, but few examinations have been made, too few for us to draw from them any just conclusion. We may, however, safely infer from the light specific gravity uniformly observed (ranging from 1036 to 1049, while the average of normal blood is 1055), that the volume of *water* is increased, and the solid matter diminished. This at first sight seems hardly probable, when we remember the enormous amount of coagula found distending the heart and vessels after death, but at the same time it proves that the colorless corpuscles must contain a relatively trifling amount of solid matter. With the decrease of the red corpuscles, the *iron* is also found to be proportionally diminished. According to the analysis quoted by Bennett, the *fibrine* in this disease is considerably increased; but more reliable investigations show that this substance, as well as the *albumen* and the *salts* of the serum, remain in their relatively normal proportion.

By far the best analysis yet made of the blood in leukämia is that of Scherer, who had previously discovered the presence of hypozanthin in the spleen. He obtained the following results from the examination of the blood of a patient dissected by Virchow himself.

Quantitative.

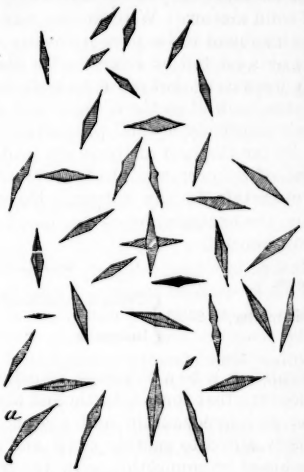
Water,	791.7				
Solid matter,	208.3	Organic constituents,	197.300		
		Inorganic "	11.084	Iron,	0.298
				Earthy phosphates,	0.598

Submitting it to a thorough investigation, he made the interesting discovery that formic, lactic and acetic acids were present, together with hypozanthin and gluten. Hypozanthin is a substance closely allied to zanthic oxyd and uric acid, and its presence in the blood in connection with the frequent urinary deposit of the latter in this disease, is well worthy of note, and may prove a valuable diagnostic sign. It is with reference to these important discoveries of Scherer that I have brought this subject before the Society, in order to make known the presence of another new principle in the blood of leukämia.

The specimen given me for examination was of a dirty reddish-brown color, and had a conserve-like density, the upper parts of the coagula being in spots marked by white concretions of the colorless corpuscles. It was very slightly acid, and had a fishy odor, although no decomposition had taken place. On microscopic examination, in addition to the usual appearance of red and colorless corpuscles, &c., numerous minute crystals were noticed, such as I had never seen before. In the blood removed from the cavities of the heart, the large vessels, and from the spleen, they were very abundant, while the portal circulation contained fewer. In a

large exudation, or abscess, situated in the cellular tissue beneath the left axilla, none were observed, although, in other respects, its microscopic characteristics closely resembled those of the blood. The crystals, unfortunately, are of the same specific weight as the white corpuscles, and therefore cannot be isolated for a separate analysis.

They are colorless, transparent, and appear to be faintly-marked, elongated, rhombic octahedra, with sharp outlines in profile. In a few instances they are united by pairs, the long axes crossing each other at right angles. Many of them differ from the true type of crystallization, being extremely elongated, and exhibiting incurved faces and such irregularities of form, as to prove their organic nature. (See cut.) This supposition is fully confirmed by the result of incineration, to which on being submitted no residue was left. In sulphuric and hydrochloric acids they are quickly dissolved. In a solution of caustic potash they are readily soluble, but no ropiness is produced by its addition to the blood, as would be the case if pus were present. In acetic acid they are also soluble, though slowly. In concentrated nitric acid they are, strange to say, completely insoluble, even when heated, and assume a faint yellow hue. By its action their acute angles are sometimes bent upon themselves, as seen at *a*. In cold and hot water they are alike insoluble, and they remain unaffected by alcohol, ether, benzole and ammonia. Judging by their behavior in the presence of the above re-agents, it is plain they are the crystals of a substance which must range itself in the class of neutral principles, and as nothing similar has ever been found in either healthy or abnormal blood, or in any part of the animal economy, so far as the latest chemical reports show, I propose for it the name of leukosin. This title seems appropriate, both on account of the color of the crystals and the disease in which they were discovered.



The blood of leukämia is very like the natural condition of this fluid in the splenic system. Scherer first discovered in the spleen the very substances which he afterwards demonstrated in this disease, and the crystals often found in this organ, lozenge shapes of

a reddish-yellow color, and described by many observers, Becquerel tells us were present in great abundance in the coagula removed from the heart in a case of leukämia. That the spleen is not the sole cause of the changes in the blood, is shown by the facts, that this organ is often otherwise affected without any consequent similar change, and that in some cases of leukämia it is found in a normal condition. The other blood or lymph glands, on the contrary, are always found diseased. At all events, the presence of so much abnormal matter in the blood, penetrating every atom of the human frame, must be sufficiently deleterious to account for the peculiar symptoms of the disease, though it is evident that in the present state of our knowledge we are far from being able to solve its mysterious etiology; but whether the state of the blood be the prime cause of it, or merely its result, all observations which tend to throw light upon its chemical composition must be received as important facts bearing upon its future solution.

CASE OF PELVIC CELLULITIS.

[Read before the Suffolk District Medical Society, Jan. 28th, 1860, and communicated for the Boston Medical and Surgical Journal.]

BY A. D. SINCLAIR, M.D.

Mrs. F., stout and healthy, was delivered of a male child on Dec. 4th, 1859. Second pregnancy. Position and presentation natural. First stage of labor lasted eight hours; second, about fifteen minutes. The placenta was taken from the vagina by gentle traction on the cord, in about twenty minutes after the birth of the child. The uterus contracted well, and there was the usual sanguineous discharge from the vagina. She complained much, during the following twenty-four hours, of pain in the right hypochondrium, to which she had been previously subject at times; this pain was relieved by mustard. Nothing remarkable showed itself until the 7th, when she was seized with pain and throbbing in the right iliac region; the pain extending round towards the back, with tenderness on pressure; much pain on moving in bed. Considerable dysuria. Constitutional disturbance not great, although she complained of occasional slight chills. Breasts decreased somewhat in bulk. Pulse 78. No dejection since the 3d. On passing the finger into the vagina, a swelling, extremely tender to the touch, was felt on the right of the uterus. Vagina not remarkable as to heat or moisture. Six leeches were applied to the anus, and turpentine and water fomentations to abdomen, and eight grains of the compound cathartic mass were ordered.

8th.—Leeches, on account of late operation of medicine, were not applied till this morning, when the bites bled well. A pill, containing one grain of calomel and half a grain of opium, was

ordered every four hours. Also, a blister with nitrate of silver to the iliac region, and warm vaginal injections.

9th.—Less throbbing in pelvis. Some fulness now over the right iliac region. Scarcely any difference, on percussion, between the two sides. Internal swelling more marked. Pain is now complained of upon touch between uterus and rectum, and uterus and bladder. Otherwise about the same. Re-applied four leeches. Dressed blister with savine cerate.

10th.—Leech bites bled well. Less uneasiness complained of in abdomen. Tenderness on pressure about the same. No dejection since 7th. Repeated cathartic pill.

13th.—Dysuria increased; defecation difficult and painful. More constitutional disturbance. Applied leeches as on 9th.

14th.—Leech bites bled sufficiently. Lochial discharge nearly absent since confinement. Vagina for the most part moist, and not particularly hot. Micturition difficult and frequent. One natural dejection since medicine of 10th, with great pain before and during discharge. A slight sanguineo-purulent discharge from vagina this morning, for the first time. Less pain on pressure over diseased side. Sleeps pretty well; feels generally more comfortable. Slight tenderness of gums, for two or three days after taking eleven pills. Calomel and opium pill to be omitted. Warm vaginal injections to be continued, and large poultice to epigastrium applied and renewed.

15th.—Some purulent discharge from vagina this forenoon after vaginal injection. No chills nor fever. Costive; otherwise as on yesterday. Cathartic pill to be repeated, and treatment of yesterday continued.

16th.—Two dejections with pain. No vaginal discharge; occasional throbbing in uterine region. Dysuria still continues. Some dull headache.

17th.—Sanguineo-purulent discharge from vagina this A.M., lasting a short time. Dysuria less; feels generally better; pulse natural.

19th.—Discharge of matter from vagina again yesterday A.M. Hectic flush very marked last night. Feels always worse in the afternoon and evening. Two dejections last evening without medicine. Less sensitive to external pressure over the iliac region. Internal swelling somewhat less. There is now felt pain on pressure a little to the left of cervix uteri, where it hitherto has never been complained of. Steamed bran fomentations to abdomen. Dublin porter. Continue vaginal injections.

22d.—Purulent discharge from rectum, noticed this morning for the first time, to the amount of half an ounce perhaps. Chill and hectic yesterday afternoon. Some throbbing in uterine region for a short time yesterday. Has been subject now and then, since confinement, to attacks of heaviness, which she describes as a

"numbness, and a kind of sleepy feeling," lasting for two or three hours. Dysuria continues less, though still troublesome. No dejection for three days. Takes porter with relish. Milk scanty. Repeat cathartic pill p. r. n., and give half an ounce of the following three times a day:—R. Citratis ferri et quiniæ, ʒiss.; infusionis colombæ, ʒviij. M.

24th.—No dejection until yesterday, when it was accompanied by much pain, and discharge of purulent and bloody matter from rectum. Chill and hectic continue in the afternoon and evening. Pain and tenderness upon pressure, now complained of for the first time, in left iliac region. Internally, tenderness seems to be complained of all around cervix uteri, but no swelling could be detected on the left side. Dulness on percussion is more marked externally than when the disease first showed itself on the right side. Pains complained of in lower extremity, but not severe. Nitrate of silver and blister to be applied to the left side.

30th.—Complains very little of pain, except on pressure. Blister healed. Dysuria, except in the morning, but little complained of. Very slight purulent discharge occasionally from vagina; none from rectum since 24th. Chill and hectic less frequent and marked. General appetite much improved. Sat up for a short time yesterday, for the first time since confinement. Appetite good. Takes iron mixture twice, and porter once, daily.

Jan. 2d, 1860.—Had a return of pelvic trouble yesterday, probably induced by sitting up rather longer than was judicious. Two leeches were applied to anus. After a while, the pain in flexing and extending extremities, lessened. Considerable discharge of fetid purulent matter from vagina yesterday. To-day dysuria returned to a slight extent.

4th.—Improving. Sits up daily. No uneasiness experienced except when bending forwards. Appetite good. Sleeps well. Pulse 78.

16th.—Slight purulent discharge from vagina two or three days ago; also a little from rectum. Still continues to improve in general health. Attends to household duties.

25th.—No purulent discharge from vagina since 12th or 13th inst. Gains strength daily. Milk varies in quantity. Has worked hard for the past two or three days, which has excited some uneasiness in the pelvis. Sleeps and eats well. Takes mixture regularly, and cathartic pill occasionally.

This is the last record I have made in this case. It is one of convalescence. Recovery from pelvic cellulitis, when it results in abscess, is always more or less tedious and lingering; uncertain, too: for when the disease has apparently stopped, it is not very unusual for it to start anew; hence the necessity of closely watching the patient recovering from this affection, until the entire disappearance of uneasiness about the pelvis.

The first case of pelvic cellulitis which I recognized and treated,

as such, was that of a young primipara, who a few days after delivery was seized with fever, pains in the pelvis, and dysuria, with tenderness on pressure in the left iliac region. Three or four days later, a marked tumor was detected externally and internally. After the administration of calomel and opium, the application of leeches to the hæmorrhoidal veins, and nitrate of silver to the affected part, the tumor was gradually absorbed. This case impressed me with the fact that I had already learned from Prof. Simpson in regard to the different terminations of this disease—viz., that of absorption, deposit of coagulable lymph, and suppuration or abscess. Prof. Simpson first suggested the name of pelvic cellulitis on account of its being in accordance with the pathology of the disease; for, as he avers, we might with equal correctness call pleurisy empyema, as pelvic cellulitis pelvic abscess.

Though this disease was known to the ancients, it was not until 1844 that the first essay appeared on the subject in modern times, written by Marchal de Calvi, a Frenchman, entitled "Intra-pelvic Phlegmonous Abscesses." About the same time, Drs. Doherty and Churchill, of Dublin, each wrote an essay on this disease; that of the former entitled "Chronic Inflammation of the Appendages of the Uterus after Parturition"—that of the latter, "Abscess of the Uterine Appendages." But we are, I believe, most indebted to Prof. Simpson, of Edinburgh, for the best and most extensive analysis of this disease—first, in his *Obstetric Memoirs*, edited by Priestly and Storer; and, more recently, in his admirable clinical lectures published in the London *Medical Times and Gazette* for July 9th, 16th and 30th, 1859.

CLOSURE OF THE FONTANELLES.

[Communicated for the Boston Medical and Surgical Journal.]

PHYSICIANS are often questioned about the proper time for the closure of the anterior fontanelle, and it may be difficult for some to answer, since the best anatomists are at variance on this point. We therefore think that it may not be unacceptable to give a summary of some recent observations, by Henri Roger, in the *Union Médicale* for November, 1859.

The researches are based upon the fact, that a cephalic souffle is not heard when the opening is closed by bone.

In three hundred children the anterior fontanelle was never found closed before the age of fifteen months, and never open after the age of three years.

It must be stated, however, that a distinction is to be made between the clinical and anatomical closure—the first being recognizable during life, the second after death.

In the first case, that is the clinical closure, the size of the opening gradually diminishes, while, at the same time, the mem-

brane becomes thicker, until it finally feels like bone. When this takes place, the cephalic souffle is no longer perceptible. The only method of determining the absolute closure by bone, is to examine the dead body. Still, we may assume, that when the fontanelles appear to be closed by ossification, they really are so.

The results arrived at in the manner abovementioned are as follows:—The period of ossification is comprised between the ages of fifteen months and three years and a half. At the first age, the complete change is very rare; at the last, is always found. But these are the extremes. The occlusion generally takes place between the second and third year, and its frequency is regularly progressive from the twentieth to the twenty-third month, increases rapidly after the second year, and still constantly augments until the age of three and a half years.

Two diseases retard this change—rickets and hydrocephalus; the first by its influence upon the ossific process, the second by its mechanical action. The non-closure of the fontanelles at the usual time, may be one of the first manifestations of rickets, and warn us of the approach of the disease. * * *

FATAL OBSTRUCTION OF THE BOWEL BY MECONIUM.

BY GEORGE R. BARNES, ESQ., M.R.C.S., CHESHIRE.

On the morning of Nov. 25th, I was called to attend Mrs. R., who was in labor of her second child. The case was a natural presentation, and the labor easy. On the birth of the child, the funis was found around the neck, as well as the arm and thigh of the corresponding side. Respiration was fully established in three or four minutes after birth. The infant was above the average size, well developed in every respect, and, to all appearance, strong and healthy. Nothing extraordinary occurred to attract attention during the first twenty-four hours. It had been applied to the breast, and sucked well. At the end of this time it was noticed to be sick, although actual vomiting did not occur, and little heed was taken of this symptom by the mother or nurse.

On my visit, the morning of the day following its birth, this circumstance was mentioned, and also the fact that no stool had been passed. Micturition had taken place. Satisfying myself that I had not a case of imperforate anus, and no urgent symptoms being present, I ordered a teaspoonful of castor oil to be administered. In the evening of the same day a messenger arrived, saying that the child was much worse; that it had passed no stool, was vomiting continually, and they believed dying. I visited it as quickly as possible, and found it extended on the nurse's lap; limbs quite lax; surface below the natural temperature; a dark-colored fluid being ejected from the mouth and nostrils at short intervals. The abdomen was largely distended and tympanitic, pressing up the dia-

phragm, and interfering with respiration, which was short and intermitting. I gave, immediately, a grain of calomel, and injected two ounces of warm water per rectum. The latter was forcibly returned without bringing away more than a plug of mucus. It was repeated with the same effect. A warm bath had been previously employed. The child was evidently sinking, and died two hours afterwards—under forty-eight hours from the time of its birth. I was anxious to know what condition had given rise to these symptoms, having concluded, in my own mind, that they were owing to occlusion of some portion of the canal. I requested an examination, which was granted.

Sectio cadaveris, twelve hours after death.—Rigidity slight; deep lividity over entire surface; putrefactive process commenced; no fluid in the cavity of the chest or pericardium; lungs healthy; coronary vessels turgid; heart, right side, distended with fluid, dark, grumous blood; ductus arteriosus contracted; abdomen, the whole length of the small intestine, much distended, partly with flatus, partly with a dark, fluid matter; stomach healthy, but pale; duodenum intensely congested for a considerable extent, very little softened; ileum less distended than the portions of bowel above. For three to four inches upwards from the ileo-cæcal valve, the contents of the bowel solid, and with difficulty protruded from the canal. Immediately at the ileo-cæcal orifice was a mass as large as a walnut. Not a particle of contents in the large intestine, which was pale, and shrunk to about the size of the stem of a tobacco-pipe. The ileo-cæcal valve of normal dimensions. The liver and kidneys healthy.

Evidently, then, from the symptoms during life, and the *post-mortem* examination, death took place from the impaction of solid contents in the small bowel, immediately in front of the ileo-cæcal orifice. No opportunity was given for the employment of active measures, collapse occurring so speedily. I do not remember reading of a case of a similar character at so early a stage of existence.—*London Lancet*, Dec. 31, 1859.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Dec. 27th.—*Chronic Laryngitis.* Dr. Cabot reported the case.

A little boy, 7 years old, was brought into the Massachusetts General Hospital, Nov. 14th, in a state of extreme dyspnœa. The respiration was labored; pulse 140, hard, quick and irregular; voice hardly audible. He was a stout, healthy-looking boy. A month before, he had contracted a cough, from exposure to cold, but was not confined to the house. The evening before his entrance, while shouting at the top of his voice, he was seized with a fit of convulsive coughing, fol-

lowed by great dyspnœa. Soon after entrance to the Hospital, he had an attack of coughing, almost causing asphyxia; the face became livid, and the extremities cold. The sputa were frothy, and mixed with blood.

The patient was immediately put into a room the atmosphere of which was saturated with the vapor of boiling water. The effect of the steam was striking; almost immediately the respiration became easier, the expression of pain and distress left his countenance, and the little fellow went off to sleep. He slept at intervals through the night, and the next morning appeared somewhat relieved. Pulse 142, more regular, but still hard. The epiglottis seemed to be slightly thickened. The respiration was comparatively easy. The sponge-probang, wet with a strong solution of nitrate of silver, was introduced twice, and one grain of iodide of potassium was ordered every two hours.

On the 16th, the pulse was 126; free muco-purulent expectoration, streaked with blood. There was pain in the trachea, at a point just below the larynx. The chest was resonant on percussion, front and back, throughout the whole extent. No vesicular murmur could be heard, on account of a peculiar whirring sound heard over the whole chest, and referred by Dr. Cabot to some cause seated in the trachea below the larynx. He was allowed a nutritious diet. The patient continued to improve, though he had occasional attacks of pain, just below the larynx, causing him to start from sleep, and scream. At these times his extremities became cold. On the 27th, his voice was quite strong, pulse 60, full and steady. Three grains of chlorate of potash were ordered three times daily. On the 28th, he was ordered quinine, in lieu of other medicine; on the 2d December, he was about the ward, and he was discharged, well, December 4th.

Dec. 27th —*Abscess and Urinary Infiltration in Perinæum, following Stricture.* Dr. Cabot reported the case.

The patient was a machinist by trade, 44 years of age, of poor physical development, and broken-down constitution. He had had gonorrhœa two years since, which lasted a long time. Three months before his entrance into the Hospital, he had difficulty in micturition, which rapidly increased, and his physician was unable to pass a catheter. Dr. C. found a stricture about two inches from the meatus, and there was a second, and very narrow one, near the neck of the bladder, which was excessively irritable. A No. 1 bougie was passed through this, and into the bladder. After this, the patient had less trouble in micturition. A week after his entrance, after the passage of a probe-pointed instrument, a few drops of blood flowed from the urethra. Subsequently, during the day, he had chills These were followed by swelling of the penis, about the region of the first stricture, with acute pain extending along the track of the ureters, and in the lumbar region. His appetite failed, and he had much thirst. An abscess apparently burst, followed by symptoms of urinary infiltration, anterior to the triangular ligament. The patient had copious sweats, the tongue was covered with a dark-brown fur, was fissured and blistered. Skin hot and dry; pulse 120, small and unsteady. Countenance expressive of much distress.

The patient being etherized, Dr. Cabot passed a No. 1 elastic bougie with considerable difficulty through the urethra into the bladder, and made a free incision along the median line. This was followed by

great relief for several days, during which the general condition of the patient improved considerably. The urine escaped freely through the catheter. There was free suppuration. In nine days after the operation, however, he began to fail, became restless and delirious, relapsed into a typhoid state, and died.

Dr. Ellis showed the organs. The cellular tissue around the penis was infiltrated with pus. The upper portion of the urethra, which remained entire, appeared healthy. The bladder was firmly contracted, and its cavity measured only an inch and one half in diameter, its walls seven eighths of an inch in thickness. The mucous membrane was of a deep red color, but not otherwise changed. The ureters were healthy. The kidneys were much lighter colored than usual. There was a considerable amount of pus in the pelvis of each. The mucous membrane was in many places of a deep red color, or covered with irregular fragments of whitish false membrane. The other organs were normal.

Bibliographical Notices.

Gustaf Von Dubin's Treatise on Microscopical Diagnosis, &c.

We are happy to say that this little work is all that it pretends to be—"A brief and practical Manual of Microscopical Diagnosis for the student and practitioner." Both may consult it with the assurance that they will be told, in a few words, many truths, perhaps not contained in cumbrous volumes, nor so hidden that it is difficult to discover them. C. E.

On Poisons in relation to Medical Jurisprudence and Medicine. By Alfred Swain Taylor, M.D., F.R.S., &c. Second American, from the second revised London Edition. Philadelphia: Blanchard & Lea.

In this edition of his work on poisons, Dr. Taylor has very materially changed its plan and intentions, confining himself entirely to those substances which are of interest in legal medicine, and omitting a very large number of drugs which were treated at considerable length in his first edition. In this way he has much improved the usefulness of his book, which is further increased by a fuller treatment of the more common poisons, and the addition of others which the progress of science has furnished.

A work of this kind has been much needed, for the constant improvements in chemistry within the past ten years have introduced many poisonous substances into common use in the arts, to say nothing of the improved methods of analysis.

The preliminary chapters are devoted to the nature, mode of action, classification, absorption and elimination of poisons. The last two topics are treated at considerable length, and with much ability, including, as they do, many of those problems about which there is the widest difference of opinion among scientific men, and upon which medical experts are very often at fault. We have space only for one instance of these:—It was formerly believed that arsenic, like lead, when given in small doses, and continued for some time, accumulates in the tissues, and after a certain time as it were, bursts into full poi-

sonous action. Dr. Taylor combats this idea very successfully, asserting that so far from remaining for a long time, this poison is eliminated from the system with even more rapidity than most of the metallic salts. Among other experiments adduced in proof of his position, are those of Mons. Flandin, where arsenic was administered to animals in slowly increasing quantities for nine months. Three days after the last dose, which was fifteen grains, the animals were killed, and no trace of the poison could be found in any of the tissues.

We notice another erroneous idea properly refuted. We allude to the statements which appeared two or three years ago in an English literary journal, and which were copied quite extensively, that in Styria, and in some parts of Hungary, the common people were in the habit of eating arsenic—the men for the purpose of making them robust and better able to endure fatigue, and the women to enhance their personal attractions. This statement was originally made by Von Tschudi, who adduces no evidence that the white powders said to be used were indeed arsenic: on the contrary, from the manner and material from which it is obtained, it is much more likely to be the oxide or some other salt of zinc. In any case, nothing but the most complete and convincing testimony would be sufficient to establish a fact so directly contrary to the common and ordinary effect of the drug.

In describing the numerous tests and methods of detecting arsenic, we think Dr. Taylor places too much reliance upon that described as "Reinsch's process," which consists briefly in precipitating the metal from a diluted hydrochloric acid solution of the tissues, upon copper foil or gauze. It is sufficient, in proof of the fallacy of this test, to allude to the very grave mistake made in the late trial of Dr. Smethurst, of Richmond, Eng., for poisoning his wife. Dr. Taylor himself stated, in a preliminary examination, that he found arsenic in the contents of one of the vials submitted to him, after testing them by Reinsch's process, in the proportion of one grain to the ounce. Subsequently, at the trial, he acknowledged his error, stating that on testing his copper gauge, he found that to contain arsenic in the proportion of nearly one grain to the ounce. We submit, that any test which, in the hands of Dr. Taylor, could be liable to so great an error, is hardly to be relied upon by less experienced operators.

We intended, had our limits permitted, to have noticed more particularly some other points in this very valuable treatise. We close by regretting to see in Dr. Taylor the same obstinate and unreasonable opposition to the use of sulphuric ether as an anæsthetic, which has from its first discovery characterized the English medical profession. In his article on ether and chloroform, Dr. T. makes no distinction, in his examples of fatal results, between sulphuric and chloric ether, calling everything simply ether; and in making up his list of casualties from its administration, he cites many which occurred before the discovery of its anæsthetic properties, when it is well known that both sulphuric and chloric ether commonly contained a sensible proportion of sulphuric or hydrochloric acid, to the vapor of which, the death was probably to be attributed. In what he says of the mixture of sulphuric ether and chloroform, first recommended by Dr. Chas. T. Jackson, of this city, to the Academy of Sciences of France, and published in their "Comptes Rendus," he leaves entirely out of view the fact that this combination was used by the French army in both the Crimean and Italian wars, with perfect safety and success; in the lat-

ter, by the reports of the surgeon (Larry), out of the 30,000 cases in which it was used, not a single bad result followed.

On the whole, we have no hesitation in pronouncing the book under notice the best treatise on poisons that has hitherto been published.

F. S. A.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 9, 1860.

DALTON'S HUMAN PHYSIOLOGY.—Long ago, when Dr. Dalton's work was issued, it was noticed as it deserved, and welcomed as an honor to the author and the profession to which he belonged. Time has only served to confirm the opinions then expressed. It was therefore with no little pleasure that we read in the *Dublin Quarterly* for November, 1859, a full and able review of it, from which we extract the following. The praise awarded our countryman is expressed in terms so kindly and just, that we feel sure we cannot present to our readers anything more acceptable.

"In a field of inquiry so vast and extensive, the life-toil of a single individual might have been expended in vain, in the futile effort to constitute what might relatively be termed an appreciable progress. The time, the energy, the talent of multitudes, were required to smooth the road that was beset with so many difficulties, and even although they might have comparatively succeeded in their object, other hands were yet wanting to give form and arrangement to the mass of material which still lay scattered in a confused and discordant heap, without order or connection. It is, however, fortunate for mankind, that the human mind is endued with such a versatile propensity, that where one can direct his attention to the more laborious occupation of direct experiment, another will be found equally zealous in the task of collecting and methodizing the results of the discoveries of his fellow-laborer, to mould them into a shape not only intelligible, but interesting to the general reader. We hold it to be, in fact, the highest attribute of our race, this rare power with which we are gifted—the tacit appropriation of ideas one from the other, making what was at one moment an individual right, the next the common property of a whole community—the unquestioned heritage of generations yet to come, bequeathed to them, to be rendered yet more valuable and prolific by the exercise of additional labor and mental exertion. And to such, therefore, is virtually due no small degree of real merit, who, apart from every selfish motive of display, are satisfied to sit down and calmly devote that ability with which they have been endowed to the less imposing task of collecting and bringing together the scattered views of others, reducing them to a uniform shape, scrutinizing with a critical but impartial eye the justice of what has been advanced, blotting out with an unsparing hand what would appear to be contrary to reason and incapable of bearing a strict investigation, impressing what is really useful and instructive, and, what is still more difficult, drawing such rational inferences from them as will have a tendency to promote the propagation of truth and the advancement of legitimate science.

"If it were necessary to produce an example of what may be accomplished in this way, we would direct the attention at once to the work at present lying before us, issued from the American press, from the pen of Dr. Dalton. This System of Physiology, both from the excellence of the arrangement studiously observed throughout every page, and the clear, lucid and instructive manner in which each subject is treated, promises to form one of the most generally received class-books in the English language. It is, in fact, a most admirable epitome of all the really important discoveries that have always been received as incontesta-

ble truths, as well as of those which have been recently added to our stock of knowledge on this subject by the labors of the leading microscopists and chemists of the present day, affording a concise but comprehensive view of the progressive steps by which the science has advanced to its present high standard of perfection, having with much wisdom, in our opinion, omitted the great majority of those disputed points, which in the infancy of this subject had crept into the field as great and established facts. In doing so, we conceive that the author has conferred a substantial boon on the student of physiology, as he has thus discarded a mass of material, curious, no doubt, in its nature, but avowedly erroneous, and, as such, worse than useless, for it could only have the effect of burthening the memory, where no positive advantage could be obtained as a compensating equivalent for the time expended in their acquirement. At the same time he has exhibited a most anxious desire to corroborate by actual experiment on his own part every result of importance that has originated from the researches of others, and has taken great pains to avoid introducing any single fact that has not been most cautiously sifted and thoroughly investigated. In all his inferences depending upon the exercise of reason, his deductions are always marked with good sense and discrimination; while his arguments in support of particular views are invested with a persuasive power that rarely fails in carrying his reader along with him in the ideas which he so ably advocates."

After several lengthy quotations, the writer concludes as follows:—

"In its purity of style and elegance of composition it may safely take its place with the very best of our English classics, while in accuracy of description it is impossible that it could be surpassed. In every line is beautifully shadowed forth the emanations of the polished scholar, whose reflections are clothed in a garb as interesting as they are impressive; with the one predominant feeling appearing to pervade the whole—an anxious desire to please and at the same time to instruct. The assistance of art has likewise been invoked as auxiliary to the powers of verbal description, and the faithful illustrations with which nearly every page is studded are such as to do infinite credit to the genius and enterprise of our Transatlantic brethren in this particular department. In closing our observations on this production of Dr. Dalton, we can only reiterate what we have already stated—the firm conviction that we entertain that it must yet take its place on the shelves of the physiologist, as one of the best and most effective works that has appeared for many years."

The Salts of Cerium in the Vomiting of Pregnancy.—Dr. Thompson, of Edinburgh, in his admirable clinical lectures on the diseases of women, reported in the *Medical Times and Gazette*, mentions one of the salts of cerium, as the most efficacious remedy for the sympathetic vomiting in pregnancy that he has employed. The salt referred to, is the *oxalate*, and in regard to it, he says that he has been successful in curing this distressing affection in a larger proportion of cases with this, than with any other single remedy that he had used. And not only in the forms of vomiting dependent on the sympathetic derangements of the stomach, consequent upon functional or pathological changes in the uterus, and other organs, but where this is due to morbid conditions of the stomach itself.

Other salts of this metal, particularly the nitrate, which was also first brought to the notice of the profession by Dr. Simpson, seem to possess the same general therapeutical properties. The *nitrate* seems to resemble very nearly the trisnitrate of bismuth in its action, which is that of a sedative tonic, acting, in part, at least, upon the mucous membrane and nerves of the stomach, to increase the tone and allay irritability.

Cerium, it will be remembered, is one of those metals about which little is known. It was first discovered in Sweden in the mineral

called *cerite*, and has since been found in Greenland, and in the States of New York and Pennsylvania in another mineral called allanite.

The oxalate is probably a compound of oxalic acid with the protoxide of the metal, and not the peroxide It is a snow-white powder, insoluble in water, but soluble in sulphuric acid, by which it is distinguished from other insoluble salts and earths.

The dose, as recommended by Dr. Simpson, is from one to two grains three or four times in the day, either in the form of pill or powder, mixed with a few grains of tragacanth.

So simple a remedy, and one so efficacious as this has proved in the hands of Dr. Simpson, in one of the most annoying and often distressing symptoms connected with pregnancy, certainly deserves a fair trial.

Glass Syringes. *Messrs. Editors*,—Soon after the vaginal glass syringes came into general use, there came under my notice a few cases of unpleasant accidents from spiculæ left in the vagina, consequent on the fracture of the instrument. I had therefore uniformly directed my patients to substitute others, not liable to fracture. The cause of the accident may be the sudden elevation of the temperature of a *portion* of the glass, by taking it, perhaps, from a cold closet, and plunging it in liquid of too high temperature. The fracture might occur, and yet the syringe hold together long enough for insertion, but crumble when the piston is thrust forward: and though no such case has come to my knowledge, I conceive it not impossible that a dangerous wound might be thus inflicted.

I was recently called to Mrs. ——, and found her in much consternation, suffering considerable pain from irritation of the membrane, in her own vain attempts to remove fragments of glass, left in the vagina by such accident. With some difficulty, I removed several jagged fragments, the largest being the hemispherical termination of the syringe (which was in contact with the *os*), having three sharp-pointed projections, lying obliquely across the vagina—and, severally, two and a half, one and a fourth, and three fourths of an inch in length. No bad consequences followed.

I improve the incident merely as an occasion for urging my objection to the *general* use of glass for such purposes, a large proportion of our patients being either too ignorant or too heedless to use such an instrument prudently; and I enclose the *memorandum* to the Journal, that the Editors may make such suggestions in the matter (if any are needed) as they deem proper. J. L. Chandler.

St. Albans, Vt., January 12th, 1860.

An excellent substitute for glass syringes may be found in those made of "hard gum," which is a peculiar preparation of India rubber.—Editors.

Messrs. Editors,—I read with much satisfaction the lead bar case. It reminded me of a case in an early volume of the Medico-Chirurgical Transactions of London, in which a silver dessert spoon was accidentally swallowed, and removed by cutting into the stomach. The operation was successful. The spoon was not of the largest size. In the same volume, I think, is the case of a Russian officer, in which the abdomen was opened and about six inches of the ileum removed, and

the cut ends connected by three sutures, with success; and if my memory serve, some other important operations within the abdominal cavity are referred to, which were also successful. I do not give these reminiscences for an *item*, but because of the remark that the lead bar case was thought to be unparalleled. W.

Election of Dr. Channing to the Obstetrical Society of London.—We learn with much pleasure that, at a recent meeting of the Obstetrical Society of London, Dr. Walter Channing was elected an Honorary Fellow.

It is needless for us to say that the Society could not have selected a more worthy recipient of this distinguished honor, marked as he has been, through the long career of his professional life, by those high qualities which have placed him among the most eminent physicians of our country.

Dr. Brown-Sequard.—It is generally reported that this distinguished physiologist, whose researches on the nervous system, more especially in relation to epilepsy and paralysis, have gained him a world-wide reputation, will be elected a physician to the proposed Hospital for Epilepsy and Paralysis, in London. This appointment would command the universal approval of the medical profession, not more on account of the unrivalled merits of the candidate, than by the impulse it would give in this country to the scientific study and treatment of nervous diseases, the results of which would be of incalculable benefit to the public and to the medical profession."—*Edinburgh Med. Jour.*

Flora of Illinois.—From a communication of Dr. George Vasey, of Ringwood, to the *Chicago Academy of Sciences*, we learn that about 200 species, including some 50 species of Cryptogamic plants, have been added to the Catalogue of the State; making some 1,200 species thus far observed.—*Chicago Medical Examiner.*

Mortuary Statistics of the Ohio Penitentiary.—For the entire 26 years of the existence of the present prison, the yearly average number of prisoners is 439. The average of deaths for each year is 17, or nearly 4 per cent.; entitling each prisoner, of average age, to the expectation of 26 years of additional life.

An interesting aspect of these statistics is shown by dividing the period of existence of the institution into two periods; one including the first 21, and the other the last 5 years. In the first of these periods, the average number of inmates is 431; the annual average of deaths, during the same time, is 19, or 4.41 per cent., entitling each prisoner, of average age, to the expectation of 22¾ years of additional life. During the last 5 years, the yearly average number of prisoners is 671; the average yearly deaths 8⅘, or 1.15 per cent.; entitling each prisoner, of average age, to the expectation of 87 years of additional life.—*Ohio Medical and Surgical Journal.*

It is understood that Sir John Forbes, the eminent physician and author, having lately suffered from severe illness, has intimated his intention of retiring from active life. He generously presented his very valuable medical library, numbering about 3,000 volumes, to the

Marischal College, Aberdeen, where he received his early education. He graduated in medicine at Edinburgh in 1817.—*Louisville Medical Journal.*

SOUTH CAROLINA MEDICAL ASSOCIATION.—At a meeting of the Executive Committee of the South Carolina Medical Association, held on August 17th, 1859, the following resolution was adopted:

Resolved, That, with the view of promoting the interests in its meetings, and increasing the value of the essays presented, a prize of one hundred dollars be offered by the Association for the best essay on a subject in any one of the departments of Medical Science.

The competition for the prize is limited to the profession of the State.—*Charleston Medical Journal and Review.*

NEW INSTRUMENT.—We have been favored with the description of a new surgical instrument, devised by Prof. Paul F. Eve, of Nashville, Tenn., for the operation now performed in cases of vesico-vaginal fistula. It consists of a screw-clamp and the twisted suture. As the article is accompanied by wood-cut illustrations, it reached us too late to have them engraved in time for this number.

Dr. J. O. Bronson, of this city, has also introduced a new instrument for the same purpose—that of dispensing with the clamp of Dr. Sims, and the button of Dr. Bozeman, in this operation.

At the Woman's Hospital, of this city, under the direction of Dr. Sims himself, neither clamps nor button are used, the silver suture alone having been found uniformly successful. Whether the new instruments afford facilities for the operation, as now simplified, future experience must decide.—*Am. Med. Gazette.*

M. GILLETTE, a distinguished physician of the Children's Hospital, died in October from diphtheritic inflammation of the throat, contracted during the treatment of a child in the country. M. Valleix met his death from the same disease. M. Gillette was respected by his brethren for his abilities as a physician, his scholarship and cordial manners.—*Cincinnati Lancet and Observer.*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, FEBRUARY 4th, 1860.

DEATHS.

	Males.	*Females*	*Total.*
Deaths during the week,	43	37	80
Average Mortality of the corresponding weeks of the ten years, 1850-1860,	38.8	37.1	75.9
Average corrected to increased population,	..	..	88.6
Deaths of persons above 90,	..	2	2

METEOROLOGY.

From Observations taken at the Cambridge Observatory.

Mean height of Barometer,	30.316	Highest point of Thermometer,	50
Highest point of Barometer,	30 620	Lowest point of Thermometer,	—8
Lowest point of Barometer,	29.604	General direction of the Wind,	S., N., NW.
Mean Temperature,	20 1-7	Whole amount of Rain in the week,	.266

Jan. 31st.—Rapid change of temperature in the afternoon. Wind blew violently from the North, with snow in the evening.

NOTICE TO CORRESPONDENTS.—" Enquirer " is referred to the " Announcement of the Summer Session of the Medical Department of Harvard University," which may may be had at this office.

Books and Pamphlets Received.—Contributions to Operative Surgery and Surgical Pathology. By J. M. Carnochan, M.D. Part III. (From the Publishers.)—History of the Cemetery of Mount Auburn. By Jacob Bigelow, M.D. (From the Publishers.)

Deaths in Boston for the week ending Saturday noon, February 4th, 80. Males, 43—Females, 37.—Accident, 1—apoplexy, 1—bronchitis, 1—congestion of the brain, 2—inflammation of the brain, 1—softening of the brain, 1—cancer, 1—consumption, 16—convulsions, 2—cholera infantum, 1—croup, 1—dropsy, 2—dropsy in the head, 4—debility, 1—epilepsy, 1—erysipelas, 1—bilious remittent fever, 1—scarlet fever, 1—typhoid fever, 2—disease of the hip, 1—intemperance, 1—inflammation of the lungs, 9—marasmus, 4—old age, 3—palsy, 1—pleurisy, 1—smallpox, 5—spina bifida, 1—unknown, 10—whooping cough, 3.

Under 5 years, 40—between 5 and 20 years, 5—between 20 and 40 years, 16—between 40 and 60 years, 12—above 60 years, 7. Born in the United States, 57—Ireland, 15—other places, 8.